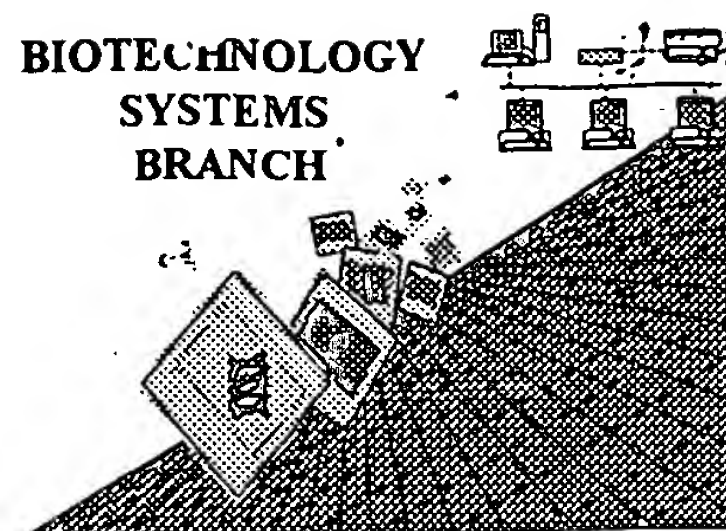


RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/910,082

Source: 018E

Date Processed by STIC: 7/30/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

BEST AVAILABLE COPY

OIPE

RAW SEQUENCE LISTING

DATE: 07/30/2001

PATENT APPLICATION: US/09/910,082

TIME: 15:56:11

Input Set : A:\2314-241.ST25.txt

Output Set: N:\CRF3\07302001\I910082.raw

3 <110> APPLICANT: University of Utah Research Foundation
 4 Cognetix, Inc.
 5 Olivera, Baldomero M.
 6 McIntosh, J. Michael
 7 Watkins, Maren
 8 Garrett, James E.
 9 Shon, Ki-Joon
 10 Jacobsen, Richard
 11 Jones, Robert M.
 12 Cartier, G. Edward

14 <120> TITLE OF INVENTION: Omega-Conopeptides

16 <130> FILE REFERENCE: 2314-241

OK> 18 <140> CURRENT APPLICATION NUMBER: US/09/910,082

OK> 18 <141> CURRENT FILING DATE: 2001-07-23

18 <150> PRIOR APPLICATION NUMBER: US 60/219,616

19 <151> PRIOR FILING DATE: 2000-07-21

21 <150> PRIOR APPLICATION NUMBER: US 60/265,888

22 <151> PRIOR FILING DATE: 2001-02-05

24 <160> NUMBER OF SEQ ID NOS: 413

26 <170> SOFTWARE: PatentIn version 3.0

28 <210> SEQ ID NO: 1

29 <211> LENGTH: 318

30 <212> TYPE: DNA

31 <213> ORGANISM: Unknown

33 <220> FEATURE:

34 <223> OTHER INFORMATION: unknown Conus species

36 <400> SEQUENCE: 1

37 ggatccatga aactgacgtg catggtgatc gtcgccgtgc tgctcctgac ggcctgtcaa 60

39 ctcatcacag ctgatgactc cagaggtacg cagaagcatc atgccctgag gtcgaccacc 120

41 aatttctcca cgttgactcg tcgctgcctt tctcccggat cacgatgtca taagacaatg 180

43 cgtaactgct gcaattcatg ctcttcatac aaagggaaat gtcggcctcg aaaatgaacc 240

45 actcatcacc tactcctctg gaggcctcag aggaattaca ttgaaataaa agccgcatta 300

47 caaaaaaaaa aaaaaaaaaa 318

50 <210> SEQ ID NO: 2

51 <211> LENGTH: 76

52 <212> TYPE: PRT

53 <213> ORGANISM: Unknown

55 <220> FEATURE:

56 <223> OTHER INFORMATION: unknown Conus species

58 <400> SEQUENCE: 2

60 Met Lys Leu Thr Cys Met Val Ile Val Ala Val Leu Leu Leu Thr Ala

61 1 5 10 15

63 Cys Gln Leu Ile Thr Ala Asp Asp Ser Arg Gly Thr Gln Lys His His

64 20 25 30

66 Ala Leu Arg Ser Thr Thr Asn Phe Ser Thr Leu Thr Arg Arg Cys Leu

67 35 40 45

69 Ser Pro Gly Ser Arg Cys His Lys Thr Met Arg Asn Cys Cys Thr Ser

2-3,5
 Does Not Comply
 Corrected Diskette Needed

RAW SEQUENCE LISTING

DATE: 07/30/2001

PATENT APPLICATION: US/09/910,082

TIME: 15:56:11

Input Set : A:\2314-241.ST25.txt

Output Set: N:\CRF3\07302001\I910082.raw

70 50 55 60
72 Cys Ser Ser Tyr Lys Gly Lys Cys Arg Pro Arg Lys
73 65 70 75
75 <210> SEQ ID NO: 3
76 <211> LENGTH: 30
77 <212> TYPE: PRT
78 <213> ORGANISM: Unknown
80 <220> FEATURE:
81 <223> OTHER INFORMATION: unknown Conus species
83 <220> FEATURE:
84 <221> NAME/KEY: PEPTIDE
85 <222> LOCATION: (1)..(30)
86 <223> OTHER INFORMATION: Xaa at residue 4 and 28 is Pro or Hyp; Xaa at residue 22 is
Tyr,
87 125I-Tyr, mono-iodo-Tyr, di-iodo-Tyr, O-sulpho-Tyr or O-phospho-T
88 (Y)? O-phospho-Tyr?
91 <400> SEQUENCE: 3
W--> 93 Cys Leu Ser Xaa Gly Ser Arg Cys His Lys Thr Met Arg Asn Cys Cys
94 1 5 10 15
W--> 96 Thr Ser Cys Ser Ser Xaa Lys Gly Lys Cys Arg Xaa Arg Lys
97 20 25 30
99 <210> SEQ ID NO: 4
100 <211> LENGTH: 283
101 <212> TYPE: DNA
102 <213> ORGANISM: Unknown
104 <220> FEATURE:
105 <223> OTHER INFORMATION: unknown Conus species
107 <400> SEQUENCE: 4
108 ggatccatga aactgacgtg cgtggtgatc gtcgccgtgc tgctcctgac ggtctgtcaa 60
110 ctcatcacag ctgatgactc cagaggtacg cagaagcatc atgccctgag gtcgaccacc 120
112 aattttctcca cgtcgactcg tcgctgcaaa cctcccggaa gaaaatgtct gaatagaaag 180
114 aatgaatgct gcagcaagtt ttgcaatgaa cacctacata tgtgtggata aatggctaaa 240
116 aactgaataa aagccgcatt gcaaaaaaaaa aaaaaaaaaa aaa 283
119 <210> SEQ ID NO: 5
120 <211> LENGTH: 74
121 <212> TYPE: PRT
122 <213> ORGANISM: Unknown
124 <220> FEATURE:
125 <223> OTHER INFORMATION: unknown Conus species
127 <400> SEQUENCE: 5
129 Met Lys Leu Thr Cys Val Val Ile Val Ala Val Leu Leu Leu Thr Val
130 1 5 10 15
132 Cys Gln Leu Ile Thr Ala Asp Asp Ser Arg Gly Thr Gln Lys His His
133 20 25 30
135 Ala Leu Arg Ser Thr Thr Asn Phe Ser Thr Ser Thr Arg Arg Cys Lys
136 35 40 45
138 Pro Pro Gly Arg Lys Cys Leu Asn Arg Lys Asn Glu Cys Cys Ser Lys
139 50 55 60
141 Phe Cys Asn Glu His Leu His Met Cys Gly
142 65 70

RAW SEQUENCE LISTING

DATE: 07/30/2001

PATENT APPLICATION: US/09/910,082

TIME: 15:56:11

Input Set : A:\2314-241.ST25.txt

Output Set: N:\CRF3\07302001\I910082.raw

144 <210> SEQ ID NO: 6
 145 <211> LENGTH: 27
 146 <212> TYPE: PRT
 147 <213> ORGANISM: Unknown
 149 <220> FEATURE:
 150 <223> OTHER INFORMATION: unknown Conus species
 152 <220> FEATURE:
 153 <221> NAME/KEY: PEPTIDE
 154 <222> LOCATION: (1)..(27)
 155 <223> OTHER INFORMATION: Xaa at residue 14 and 22 is Glu or gamma-carboxy Glu; Xaa at
 resi
 156 due 3 and 4 is Pro or (Hy)
 159 <400> SEQUENCE: 6
 W--> 161 Cys Lys Xaa Xaa Gly Arg Lys Cys Leu Asn Arg Lys Asn Xaa Cys Cys
 162 1 5 10 15
 W--> 164 Ser Lys Phe Cys Asn Xaa His Leu His Met Cys
 165 20 25
 167 <210> SEQ ID NO: 7
 168 <211> LENGTH: 275
 169 <212> TYPE: DNA
 170 <213> ORGANISM: Unknown
 172 <220> FEATURE:
 173 <223> OTHER INFORMATION: unknown Conus species
 175 <400> SEQUENCE: 7
 176 ggatccatga aactgacgtg cgtggtgatc gtcgccgtgc tgctcctgac ggcctgtcaa 60
 178 ctgctcacag ctgatggctc cagaggtatg cagaagcatt atgccctgag gtcgaccacc 120
 180 aatctctcca tatcgtctcg ctgcaaacct cccagaagaa aatgtctgaa gattaaggat 180
 182 aaatgctgca acttttgcaa tacacaccta aatatgtgtg gataaatggc taaaaactga 240
 184 ataaaagccg cattgcaaaa aaaaaaaaaa aaaaa 275
 187 <210> SEQ ID NO: 8
 188 <211> LENGTH: 72
 189 <212> TYPE: PRT
 190 <213> ORGANISM: Unknown
 192 <220> FEATURE:
 193 <223> OTHER INFORMATION: unknown Conus species
 195 <400> SEQUENCE: 8
 197 Met Lys Leu Thr Cys Val Val Ile Val Ala Val Leu Leu Leu Thr Ala
 198 1 5 10 15
 200 Cys Gln Leu Val Thr Ala Asp Gly Ser Arg Gly Met Gln Lys His Tyr
 201 20 25 30
 203 Ala Leu Arg Ser Thr Thr Asn Leu Ser Ile Ser Ser Arg Cys Lys Pro
 204 35 40 45
 206 Pro Arg Arg Lys Cys Leu Lys Ile Lys Asp Lys Cys Cys Asn Phe Cys
 207 50 55 60
 209 Asn Thr His Leu Asn Met Cys Gly
 210 65 70
 212 <210> SEQ ID NO: 9
 213 <211> LENGTH: 26
 214 <212> TYPE: PRT
 215 <213> ORGANISM: Unknown

RAW SEQUENCE LISTING

DATE: 07/30/2001

PATENT APPLICATION: US/09/910,082

TIME: 15:56:11

Input Set : A:\2314-241.ST25.txt

Output Set: N:\CRF3\07302001\I910082.raw

217 <220> FEATURE:

218 <223> OTHER INFORMATION: unknown Conus species

220 <220> FEATURE:

221 <221> NAME/KEY: PEPTIDE

222 <222> LOCATION: (1)..(26)

223 <223> OTHER INFORMATION: Xaa at residue 3 and 4 is Pro or Hyp

226 <400> SEQUENCE: 9

228 Cys Lys Xaa Xaa Arg Arg Lys Cys Leu Lys Ile Lys Asp Lys Cys Cys

229 1 5 10 15

231 Asn Phe Cys Asn Thr His Leu Asn Met Cys

232 20 25

234 <210> SEQ ID NO: 10

235 <211> LENGTH: 377

236 <212> TYPE: DNA

237 <213> ORGANISM: Unknown

239 <220> FEATURE:

240 <223> OTHER INFORMATION: unknown Conus species

242 <400> SEQUENCE: 10

243 ggatccatga aactgacgtg tgtggtgatc gtcgccgtgc tgctcctgat ggcctgtcaa 60

245 ctcgtcacag ctgatggctc cagaggatg cacaagcatt atgccctgag gtcgaccacc 120

247 aaactctcca tgctgactcg ctgcgcaggt ccaggaacaa tttgtcctaa tagggatatgc 180

249 tgcggttatt gcagtaaaag aacacatcta tgctattcgc gaactggctg atcttcccc 240

251 ttctgcgctc catccttttc tgcctgagtc ctccatacct gagaatggtc atgaaccact 300

253 caacacctac tcctctggag ggcctcagaa gagctacatt gaaataaaag ccgcattaca 360

255 aaaaaaaaaa aaaaaaa 377

258 <210> SEQ ID NO: 11

259 <211> LENGTH: 74

260 <212> TYPE: PRT

261 <213> ORGANISM: Unknown

263 <220> FEATURE:

264 <223> OTHER INFORMATION: unknown Conus species

266 <400> SEQUENCE: 11

268 Met Lys Leu Thr Cys Val Val Ile Val Ala Val Leu Leu Leu Met Ala

269 1 5 10 15

271 Cys Gln Leu Val Thr Ala Asp Gly Ser Arg Gly Met His Lys His Tyr

272 20 25 30

274 Ala Leu Arg Ser Thr Thr Lys Leu Ser Met Ser Thr Arg Cys Ala Gly

275 35 40 45

277 Pro Gly Thr Ile Cys Pro Asn Arg Val Cys Cys Gly Tyr Cys Ser Lys

278 50 55 60

280 Arg Thr His Leu Cys His Ser Arg Thr Gly

281 65 70

283 <210> SEQ ID NO: 12

284 <211> LENGTH: 28

285 <212> TYPE: PRT

286 <213> ORGANISM: Unknown

288 <220> FEATURE:

289 <223> OTHER INFORMATION: unknown Conus species

291 <220> FEATURE:

RAW SEQUENCE LISTING

DATE: 07/30/2001

PATENT APPLICATION: US/09/910,082

TIME: 15:56:11

Input Set : A:\2314-241.ST25.txt

Output Set: N:\CRF3\07302001\I910082.raw

292 <221> NAME/KEY: PEPTIDE
 293 <222> LOCATION: (1)..(28)
 294 <223> OTHER INFORMATION: Xaa at residue 4 and 9 is Pro or Hyp; Xaa at residue 16 is
 Tyr, 1
 295 25I-Tyr, mono-iodo-Tyr, di-iodo-Tyr, O-sulpho-Tyr or O-phospho-Tyr? Tyr?
 299 <400> SEQUENCE: 12
 W--> 301 Cys Ala Gly Xaa Gly Thr Ile Cys Xaa Asn Arg Val Cys Cys Gly Xaa
 302 1 5 10 15
 304 Cys Ser Lys Arg Thr His Leu Cys His Ser Arg Thr
 305 20 25
 307 <210> SEQ ID NO: 13
 308 <211> LENGTH: 323
 309 <212> TYPE: DNA
 310 <213> ORGANISM: Conus arenatus
 312 <400> SEQUENCE: 13
 313 ggatccatga aactgacgtg catggtgatc atcgccgtgc tgttcctgac ggcctgtcaa 60
 315 ctcatcacag gtgagcagaa ggaccatgct ctgaggtcaa ctgacaaaaa ctccaagttg 120
 317 actaggcagt gctcggctaa cgggtggatct tgtactcgtc attttcactg ctgcagcctc 180
 319 tattgcaata aagattccag tgtatgtgtg gcaacctcat acccgtgagt ggccatgaac 240
 321 ccctcaatac cctctcctct ggaggcttca gaggaactgc attgaaataa aaccgcattg 300
 323 caataaaaaa aaaaaaaaaa aaa 323
 326 <210> SEQ ID NO: 14
 327 <211> LENGTH: 73
 328 <212> TYPE: PRT
 329 <213> ORGANISM: Conus arenatus
 331 <400> SEQUENCE: 14
 333 Met Lys Leu Thr Cys Met Val Ile Ile Ala Val Leu Phe Leu Thr Ala
 334 1 5 10 15
 336 Cys Gln Leu Ile Thr Gly Glu Gln Lys Asp His Ala Leu Arg Ser Thr
 337 20 25 30
 339 Asp Lys Asn Ser Lys Leu Thr Arg Gln Cys Ser Ala Asn Gly Gly Ser
 340 35 40 45
 342 Cys Thr Arg His Phe His Cys Cys Ser Leu Tyr Cys Asn Lys Asp Ser
 343 50 55 60
 345 Ser Val Cys Val Ala Thr Ser Tyr Pro
 346 65 70
 348 <210> SEQ ID NO: 15
 349 <211> LENGTH: 33
 350 <212> TYPE: PRT
 351 <213> ORGANISM: Conus arenatus
 353 <220> FEATURE:
 354 <221> NAME/KEY: PEPTIDE
 355 <222> LOCATION: (1)..(33)
 356 <223> OTHER INFORMATION: Xaa at residue 1 is Gn or pyro-Glu; Xaa at residue 33 is Pro
 or H
 357 yp; Xaa at residue 19 and 32 is Tyr, 125I-Tyr, mono-iodo-Tyr, di-
 358 iodo-Tyr, O-sulpho-Tyr or O-phospho-Tyr? Tyr?
 361 <400> SEQUENCE: 15
 W--> 363 Xaa Cys Ser Ala Asn Gly Gly Ser Cys Thr Arg His Phe His Cys Cys
 364 1 5 10 15
 W--> 366 Ser Leu Xaa Cys Asn Lys Asp Ser Ser Val Cys Val Ala Thr Ser Xaa

Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/910,082

DATE: 07/30/2001

TIME: 15:56:12

Input Set : A:\2314-241.ST25.txt

Output Set: N:\CRF3\07302001\I910082.raw

L:18 M:270 C: Current Application Number differs, Replaced Current Application No
L:18 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:93 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:96 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:164 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:228 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:301 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:363 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:366 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:369 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:428 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:431 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:490 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:493 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:496 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:555 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:558 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:618 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:646 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:686 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:748 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
L:751 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
L:810 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36
L:813 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36
L:873 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39
L:937 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:940 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:1000 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45
L:1064 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48
L:1067 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48
L:1128 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51
L:1131 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51
L:1134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51
L:1195 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54
L:1198 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54
L:1259 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57
L:1262 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57
L:1323 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60
L:1326 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60
L:1387 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63
L:1390 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63
L:1393 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63
L:1453 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:1515 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69
L:1518 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69
L:1521 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69
L:1551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/910,082

DATE: 07/30/2001

TIME: 15:56:12

Input Set : A:\2314-241.ST25.txt

Output Set: N:\CRF3\07302001\I910082.raw

L:1599 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74
L:1647 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:77
L:1694 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80
L:1743 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83